

## RECORDS AND DESCRIPTIONS OF NEOTROPICAL CRANE-FLIES (TIPULIDÆ, DIPTERA), XX

BY CHARLES P. ALEXANDER

AMHERST, MASSACHUSETTS

The preceding part under this general title was published in March 1945 (JOURNAL OF THE NEW YORK ENTOMOLOGICAL SOCIETY, 53: 49-61). The majority of the novelties here treated are from Costa Rica where they were collected by the late Pablo Schild. Such materials were contained in the extensive Melander Collection which I have been privileged to study through the kindly interest of Dr. Melander. I am further indebted for the great privilege of retaining the types of such species as are based on a single specimen. A few further species are from Panama where they were collected by Dr. C. Howard Curran and are preserved in the American Museum of Natural History. I am very indebted to Drs. Curran and Melander for much friendly co-operation in this survey of the crane-flies of Tropical America.

### Genus *Teucholabis* Osten Sacken

#### *Teucholabis* (*Teucholabis*) *circumscripta* new species.

General coloration of thorax handsomely patterned with yellow, black and chestnut, the præscutum with three separate black stripes, the lateral pair crossing the suture and entirely covering the scutal lobes; postnotum entirely black; pleura black, with a yellow ventral longitudinal stripe; halteres with yellow knobs; femora obscure brownish yellow, the tips blackened; wings whitish subhyaline, characteristically patterned with brown, including a narrow border that almost encircles the wing; abdominal segments black, ringed with yellow; male hypopygium with the inner dististyle terminating in a single developed spine.

MALE.—Length about 6 mm.; wing 6.2 mm.

Rostrum unusually long, subequal to or exceeding the remainder of head, black throughout; palpi black. Antennæ black; basal flagellar segments oval, the outer ones more elongate; terminal segment about two-thirds as long as the penultimate; verticils longer than the segments. Head above with a large black area that occupies much of the vertex, leaving the front and part of anterior vertex, together with the posterior portions of head paler.

Pronotum partly hidden, evidently yellow, the sides more darkened; pretergites pale yellow. Mesonotum with an unusually handsome pattern; præ-

scutum with three black stripes, the median one broadened at cephalic end, narrowed behind and not reaching the suture; lateral stripes much wider, crossing the suture and involving all of the scutal lobes; præscutal interspaces light chestnut, the humeral and lateral portions conspicuously light yellow; central region of scutum and the scutellum conspicuously pale yellow, the extreme posterior median area of præscutum concolorous; parascutella dark brown; postnotum entirely black. Pleura conspicuously patterned; ground color black, including the dorsopleural area and the ventral sternopleurite; a yellow longitudinal stripe extending from behind the fore coxæ to the base of abdomen, more widened behind; midsternal region again light yellow. Halteres with stem blackened, knob light yellow. Legs with all coxæ and trochanters black; femora obscure brownish yellow basally, the tips conspicuously blackened, on the dilated fore femora including more than the distal third, on the posterior legs involving about the outer fourth or fifth; posterior femora with basal half infuscated, isolating a broad subterminal yellow ring; tibiæ obscure yellow, the bases and tips narrowly darkened; tarsi brownish black, posterior basitarsi narrowly dilated at proximal end and with a sensory pocket; claws simple. Wings with the ground color whitish subhyaline, conspicuously patterned with brown, including a narrow border that encircles the wing, from *h* to the axillary angle, including all of cells *C* and *Sc* and remaining of approximately this general width throughout; further brown spots at origin of *Rs*, stigma, cord, outer end of cell *1st M*<sub>2</sub> and at end of vein *2nd A*, mostly confluent with the marginal darkening; preareolar field pale; veins light brown, darker in the patterned fields. Venation: *Sc* long; *Sc*<sub>1</sub> ending about opposite three-fifths *Rs*; *R*<sub>2</sub> slightly more than one-half longer than *R*<sub>2+3+4</sub>; cell *1st M*<sub>2</sub> strongly widened outwardly, nearly as long as vein *M*<sub>1+2</sub> beyond it; *m-cu* about one-third its length beyond the fork of *M*.

Abdominal tergites black, the extreme caudal borders of the segments paler; sternites with the basal segment yellow; succeeding segments conspicuously bicolored, black, the incisures broadly yellow, including about the distal fourth of each segment, as well as the extreme cephalic border of the succeeding segment; hypopygium chiefly brownish black. Sternal pockets restricted in area, that on segment five largest, the lateral setæ not forming rows. Male hypopygium with the apical spine of basistyle straight, broad-based, narrowed rapidly to the acute terminal spinous point, the inner margin conspicuously fringed with long yellow setæ; mesal lobe conspicuous but not blackened, provided with elongate setæ. Outer dististyle a long simple rod, the extreme tip apparently broken; surface with long setæ. Inner dististyle relatively narrow, terminating in a single developed spine, the usual basal armature lacking; lobe near base of style terminating in a very few setæ of various lengths. Ædeagus relatively narrow, the lower margin at apex further produced into a long curved spine; ventral margin with a group of three unusually long setæ at near three-fourths the length, with an isolated additional seta nearer the base; on dorsal edge with a single further strong bristle.

Habitat.—Costa Rica.

Holotype, ♂, Turrialba, November 1922 (Schild).

*Teucholabis (Teucholabis) circumscripta* is entirely different from all described regional species in the very characteristic pattern of both the thorax and wings. No approximately similar species can be indicated.

***Teucholabis (Teucholabis) diplaca* new species.**

Size medium (wing, male, 5 mm.); general coloration polished black and yellow, the black including a discal area on præscutum; head polished orange yellow; femora yellow, tips black; posterior tibiæ (male) with a blackened tubercle on outer sixth; wings whitish subhyaline, virtually unpatterned except for the narrow triangular stigma; base of cell *Sc* darkened; *Sc*<sub>1</sub> ending about opposite one-third the length of *Rs*; abdominal segments black, ringed caudally with yellow; male hypopygium with the apical lobe of basistyle appearing as a broad plate, its outer apical angle further produced into a long slender spine, the inner angle with three smaller spinous points; outer dististyle a long simple blackened rod.

MALE.—Length about 5.5 mm.; wing 5 mm.

Rostrum orange; palpi black. Antennæ with scape and pedicel obscure orange, flagellum black; flagellar segments oval, the outer ones smaller; verticils of the more proximal segments subequal in length to the segments. Head polished orange yellow.

Pronotum chiefly orange yellow; pretergites light yellow. Thorax handsomely patterned with polished black and light yellow; præscutum chiefly black, with three areas that form a complete disk behind, split in front to isolate narrow yellow lines on the cephalic third of sclerite; scutellum, median area of scutum and an adjoining small median area on præscutum yellow, the suture entirely yellow; scutal lobes extensively black; parascutella orange; postnotum black, the mediotergite with an extensive yellow lateral border on the cephalic half or more. Pleura conspicuously patterned with black and yellow, the former including the polished sternopleurite and anepisternum, with smaller areas on the propleura and metapleura; dorsopleural membrane and the entire pteropleurite yellow; no pruinose area on pleura, as in many species in the genus. Halteres brownish black, knobs orange. Legs with all coxæ and trochanters orange yellow; femora yellow, the tips broadly and conspicuously black; tibiæ obscure yellow, the tips darkened; tarsi brownish black; posterior tibiæ near outer sixth with a small blackened tubercle or knob; proximal fifth of hind basitarsus swollen. Wings whitish subhyaline, virtually unpatterned except for the unusually narrow triangular dark brown stigma; base of cell *Sc* narrowly darkened; veins comprising the cord and outer end of cell *1st M*<sub>2</sub> somewhat more intensely darkened but the membrane not involved; veins dark brown, *C*, *Sc* and *R* more yellowed. Venation: *Sc*<sub>1</sub> ending about opposite one-third the length of *Rs*, *Sc*<sub>2</sub> some distance

from its tip,  $Sc_1$  alone nearly as long as  $R_2$ ; anterior branch of  $Rs$  gently sinuous, slightly upcurved at tip so cell  $R_2$  at margin is only a little more extensive than cell  $R_3$ ; outer section of  $M_{1+2}$  arcuated;  $m-cu$  at or just before the fork of  $M$ .

Abdomen black, ringed with yellow, the latter color involving the posterior margins of the segments; hypopygium chiefly darkened. Sternal pocket of segment five extensive, more or less triangular in outline, the setæ converging toward the midline, the more central ones smallest; setæ of sternite six more widely separated, including only about six or seven on either side. Male hypopygium with the apical lobe of basistyle unique, appearing as a broad flattened plate, the outer apical angle of which is produced into a long slender spine, the opposite apical angle produced into about three smaller spinous points; inner margin and apex of plate provided with long yellow setæ; near base of plate with a small lobe bearing about four long marginal setæ; mesal flange of basistyle with smooth margin. Outer dististyle a long slender simple blackened rod, the tip acute, the surface with conspicuous appressed spinulæ on outer face and with strong tuberculate points. Inner dististyle with the outer and basal teeth powerful, separated from one another by an oval notch, the margins thickened; basal lobe of style with about five very long setæ. Ædeagus stout, the apex expanded into obtusely rounded blades; setæ relatively numerous and unusually long.

Habitat.—Panama.

Holotype, ♂, Barro Colorado Island, Canal Zone, February 13, 1929 (Curran); American Museum of Natural History.

*Teucholabis* (*Teucholabis*) *diplaca* is quite distinct from all others of the very numerous regional species of the subgenus. It differs especially in the structure of the male hypopygium, more particularly the outer lobe of the basistyle. This latter structure is approximated by species such as *T.* (*T.*) *bigladia* Alexander, *T.* (*T.*) *viramosa* Alexander, and *T.* (*T.*) *scabrosa* Alexander, all of which are entirely different in other respects and evidently not closely allied.

***Teucholabis* (*Teucholabis*) *platyphallus* new species.**

Allied to *furva*; mesonotum black, pronotum yellow; thoracic pleura with a conspicuous ventral pale stripe; knobs of halteres light yellow; posterior basitarsi (male) dilated and with an elongated setuliferous pocket; wings with a brownish tinge, the cephalic border more whitened; stigma oval, darker brown;  $Sc_1$  ending about opposite midlength of  $Rs$ ; branches of  $Rs$  extending generally parallel to one another; male hypopygium with the outer lobe of basistyle a broad flattened blade, its margin fimbriate; outer dististyle a long simple sinuous rod, microscopically spinulose and with scattered elongate setæ; inner dististyle trilobed, the basal lobe cylindrical and tipped

with four long setæ; ædeagus unusually expanded, subtriangular in outline, with paired setæ on the dorsal and ventral margins.

MALE.—Length about 5.5 mm.; wing 5.5 mm.

Rostrum obscure brownish yellow; palpi black. Antennæ with basal segments pale brown, the outer ones darker; under face of scape more yellowed; basal flagellar segments short-oval, the outer segments more elongate; verticils conspicuous. Head dark liver brown.

Pronotum and pretergites, with the restricted humeral region of præscutum, yellow. Remainder of mesonotum, including scutellum and pleurotergite, black. Pleura chiefly black, the propleura and a conspicuous ventral stripe on the mesopleura pale yellow, whitish pruinose, this color including the whole ventral portion of thorax excepting the restricted ventral sternopleurite. Halteres with stem infuscated, knob light yellow. Legs with the coxæ yellow, the fore pair a trifle darker; trochanters yellow; remainder of legs long and relatively slender, obscure yellow; tips of femora narrowly and weakly darkened, on the fore pair a little more extensive and gradually darkened; tibiæ obscure yellow, the tips narrowly dark brown; basal segments of tarsi obscure yellow, the terminal segments more darkened; claws simple; posterior basitarsi (male) with proximal end dilated and provided with an elongated setuliferous pocket. Wings with a brownish tinge, the prearcular and costal fields, together with areas before and beyond the stigma, more whitened; stigma oval, darker brown; a weak brown cloud over anterior cord; veins brown, those in the prearcular field more yellowed. Venation: *Sc* ending about opposite midlength of the long *Rs*, the latter very weakly bent at near midlength; branches of *Rs* extending generally parallel to one another for their entire lengths; cell 1st  $M_2$  subequal to or a trifle longer than vein  $M_4$ ; *m-cu* shortly beyond the fork of *M*.

Abdominal tergites brownish black; sternites paler medially, more darkened on sides; outer segments, including hypopygium, more uniformly blackened. Sternal pockets well developed on both segments five and six. Male hypopygium with the outer lobe of basistyle subapical in position, appearing as a broad flattened blade, its outer third narrowed into a long terminal spine; inner margin of blade with a fringe of long yellow setæ; darkened flange of mesal face of style relatively untoothed, the outer portion smooth, the central part emarginate, the cephalic third with two or three coarse denticles. Outer dististyle a long simple sinuous rod, narrowed very gradually to an acute spine, the outer surface with microscopic appressed spinulæ and a few long setæ. Inner dististyle blackened, trilobed, the outer lobe stout and obtuse, the inner one a sharp spine; basal lobe cylindrical, tipped with about four unusually long setæ, these subequal to or exceeding in length the lobe itself. Ædeagus unusually expanded, subtriangular in outline, the lower apical angle a curved black spine; surface smooth except for two powerful setæ on lower edge at near three-fourths the length and two others on dorsal edge, a trifle more basad in position.

Habitat.—Costa Rica.

Holotype, ♂, Turrialba, November 1922 (Schild).

The nearest relative of the present fly appears to be *Teucholabis* (*Teucholabis*) *furva* Alexander, which differs in the pattern of the body and wings, and in the details of structure of the male hypopygium.

***Teucholabis* (*Teucholabis*) *serrulifera* new species.**

Allied to *furva*; mesonotal præscutum and scutal lobes polished black; a broad black stripe over the dorsal thoracic pleurites; rostrum and palpi black; knobs of halteres a little paler than the stem; wings with a weak blackish tinge, a little more intense on outer fourth; stigma dark brown;  $Sc_1$  ending opposite midlength of  $R_s$ ; branches of  $R_s$  parallel to one another for most of their lengths; male hypopygium with the spine of basistyle slender, glabrous; outer dististyle at base widely expanded into a lobe or blade bearing spines and conspicuous setæ, aedeagus with the apical spine bent laterad, before the tip with a conspicuous lobe that bears a few setæ.

MALE.—Length about 5.5 mm.; wing 5.5 mm.

Rostrum and palpi black, the former relatively long, about two-thirds the remainder of head. Antennæ black throughout; flagellar segments oval; terminal segment shorter than the penultimate; verticils exceeding the segments in length. Head brownish black.

Pronotal scutum obscure yellow, more infuscated laterally; scutellum and pretergites light yellow. Mesonotal præscutum and scutal lobes uniformly polished black, only the reduced humeral region of the former obscure yellow; median region of scutum and posterior portions of the lobes narrowly obscure yellow; scutellum dark brown, parascutella yellow; postnotum black, the suture between the mediotergite and pleurotergite narrowly reddened. Pleura conspicuously bicolored, the entire venter light yellow, including the sternopleurite and meral region; dorsal pleurites occupied by a broad black longitudinal stripe extending from the sides of the pronotum across the anepisternum and dorsal pteropleurite onto the postnotum; dorsopleural region yellow; no well-developed silvery area on pleura. Halteres with stem blackened, apex of knob a little paler, obscure yellowish brown. Legs with fore coxæ blackened, remaining coxæ and all trochanters yellow; femora yellow basally, the tips blackened, most broadly so on fore legs where about the distal third is included, narrowest on posterior femora where only the outer sixth or seventh is blackened; tibiæ brownish black; tarsi black; posterior basitarsi strongly dilated, at proximal end with a setuliferous pocket. Wings with a weak blackish tinge, slightly more intense on outer fourth; stigma oval, dark brown; a narrow, vague, darkened seam over cord; veins dark brown, brownish yellow in the preareolar field. Venation:  $Sc$  relatively long,  $Sc_1$  ending about opposite midlength of the long  $R_s$ ;  $R_{1+2}$  and  $R_{2+3+4}$  subequal, both a little more than one-half  $R_2$ ; branches of  $R_s$  extending generally parallel to one another for almost their whole lengths,  $R_5$  near its apex diverging, ending at tip of wing; cell  $1st M_2$  narrow, subequal to distal section of  $M_3$ ;  $m-cu$  a short distance beyond fork of  $M$ .

Abdominal tergites and hypopygium black; basal sternites a trifle more

pieceous. Pocket on fifth sternite oval, with about eight setæ on either side, these directed toward the midline, the area comprised of abundant small bulbous structures ending in small points; on sixth sternite, setæ about ten on either side, widely separated at midline. Basistyle with apical spine very slender, subapical in position, without setæ; mesal lobe irregularly crose, the denticles interspersed with long setæ. Outer dististyle a broad flattened blade that narrows gradually to a slender apical spine, the outer edge microscopically serrulate; near base, style broadly expanded, bearing a long slender spine, provided with abundant long coarse setæ and a few smaller spinous points. Inner dististyle conspicuously bispinous, the outer spine larger and more curved; at base of style a broad lobe that bears a transverse row of about five strong spinous setæ. *Ædeagus* relatively narrow, the apical third bent strongly laterad into a long blackened spine, before the apex of which, on lower face, bearing a strong cylindrical lobe with two or three apical setæ and one unusually long additional bristle nearer base; on opposite side of *ædeagus*, at point of bending, with a nearly rectangular lobe, below which are two strong setæ.

Habitat.—Costa Rica.

Holotype, ♂, Turrialba, November 1922 (Schild).

This species and various others, center about *Teucholabis* (*Teucholabis*) *furva* Alexander which they resemble in general appearance and venation, but differ in all details of the male hypopygium, especially the spine of the basistyle, both dististyles and the *ædeagus*.

***Teucholabis* (*Teucholabis*) *turrialbensis* new species.**

MALE.—Length about 6 mm.; wing 5 mm.

Closely related and generally similar to *serrulifera* new species, differing especially in the structure of the male hypopygium. Wings with *Sc* somewhat shorter, *Sc*<sub>1</sub> ending before midlength of *Rs*.

Sternal pocket of sixth segment of male with the setæ fewer in number, totalling six or seven. Male hypopygium with the outer dististyle much more slender and subcylindrical, not flattened, the armature much restricted; serrulations of outer surface smaller and inconspicuous; spinous flange of mesal face much smaller, closely applied to the style, the outermost spine long and slender.

Habitat.—Costa Rica.

Holotype, ♂, Turrialba, November 1922 (Schild); Melander Collection. Paratopotype, ♂; Alexander Collection.

Genus *Gnophomyia* Osten Sacken

***Gnophomyia* (*Gnophomyia*) *curraniana* new species.**

Head and abdomen black; thorax, excepting the postnotal scutum and the metapleura, orange; halteres and legs black; wings broad, dark brown, with

a wide whitish band at and beyond midlength; cells *C* and *Sc* uniformly darkened; cell *R*<sub>2</sub> at margin wider than cell *R*<sub>3</sub>; cord transverse; cell 1st *M*<sub>2</sub> rectangular.

FEMALE.—Length about 7 mm.; wing 7 mm.

Rostrum and palpi black. Antennæ black throughout; flagellar segments oval, gradually decreasing in size outwardly. Head uniformly black.

Pronotum with scutum black, scutellum orange, the sunken central portion a little paler. Mesonotum and pleura uniformly orange, only the metapleura beneath the root of the halteres blackened. Halteres black, the extreme base of stem orange. Legs, including coxæ and trochanters, black. Wings broad, conspicuously dimidiate; dark brown, with a broad whitish band at and beyond midlength; cells *C* and *Sc* uniformly darkened; basal two-fifths of wing slightly paler brown than the apical fourth, the latter a trifle more extensive than the white band; the latter includes most of cell *R*<sub>1</sub>, thence continued to the posterior border as a nearly parallel-sided area, the outer edge lying just beyond cord so the bases of cells *R*<sub>4</sub> to *M*<sub>4</sub> are whitened; conspicuous white streaks along veins *M* and 1st *A*, with further similar lines in basal portion of cell *R* and near outer end of cell *Cu*; veins brown, not paler in the brightened field, excepting certain elements at cord. Macrotrichia abundant in all cells beyond cord and in outer ends of cells *R*<sub>1</sub>, *Cu* and 1st *A*. Venation: *Sc*<sub>1</sub> ending just before fork of *Rs*; *R*<sub>2</sub> suboblique; *R*<sub>3+4</sub> present as a short to very short element; veins *R*<sub>3</sub> and *R*<sub>4</sub> more nearly parallel than in *leucoplaca*, cell *R*<sub>2</sub> wider than cell *R*<sub>3</sub>; in *leucoplaca*, the veins divergent so the cells are subequal in area at the margin; basal section of *R*<sub>5</sub> short and straight, the entire cord transverse; in *leucoplaca*, anterior cord oblique, the inner end of cell *R*<sub>4</sub> lying more proximad than the other cells; cell 1st *M*<sub>2</sub> more rectangular.

Abdomen black; ovipositor with the cerci unusually slender, dark chestnut brown, gradually narrowed to the subacute tips, the surface glabrous.

Habitat.—Panama.

Holotype, ♀, Barro Colorado Island, Canal Zone, February 13, 1929 (Curran); American Museum of Natural History.

The most similar described species is *Gnophomyia* (*Gnophomyia*) *leucoplaca* Alexander, from the upper Amazons (Teffé, Amazonas, Brazil), which differs in the much greater extent of black coloration, particularly of the præscutum and mesopleura, and in distinct venational details, as compared above. In *leucoplaca*, the cells of the outer radial field are uniformly darkened, without broad white bases in *R*<sub>4</sub> and *R*<sub>5</sub>, as in the present fly. The species is named in honor of the collector, the distinguished Dipterologist, Dr. C. Howard Curran.

***Gnophomyia* (*Gnophomyia*) *pulvinaris* new species.**

Allied to *mæstitia*; general coloration of body and appendages black, the lateral portions of the pronotal scutellum yellow; halteres uniformly black-



ened; wings tinged with brown, with a still darker brown pattern, including a broad band at cord; male hypopygium with the caudal margin of tergite gently concave, with a double row of at least one hundred spinous setæ; basistyle on proximal portion of mesal face with an oval area or cushion including about fifty blackened setæ; outer dististyle with inner margin with irregular blackened teeth.

MALE.—Length about 4.5 mm.; wing 5.1 mm.

FEMALE.—Length about 4.5 mm.; wing 4.8 mm.

Rostrum and palpi black. Antennæ black throughout; flagellar segments elongate, subcylindrical, with long conspicuous verticils, the longest much exceeding the segments, unilaterally arranged on the outer face; in addition to the coarse verticils, the segments clothed with abundant finer setæ. Head dull black, sparsely pruinose in front; anterior vertex broad, approximately four times the diameter of scape.

Pronotum dark brown, the lateral portions of the scutellum clear light yellow. Mesonotum almost uniformly brownish black, the surface more or less polished. Pleura black, more pruinose on the ventral and posterior portions, including the pleurotergite; dorsal pleurites, as well as the dorsopleural membrane, deep velvety black. Halteres black throughout. Legs with the coxæ dark brown, more or less pruinose, especially the middle pair; remainder of legs black. Wings with a brownish tinge, rather distinctly patterned with still darker brown, this appearing especially as a broad dark band at the cord and darkening in cells *M* and bases of *Cu* and *1st A*; stigma long and narrow, dark brown; veins brownish black. Venation: *Rs* with its basal section oblique, straight; *r-m* variable in position, in the type a short distance before the fork of *Rs*, in the allotype just beyond the fork;  $R_{2+3+4}$  in direct alignment with  $R_{2+3}$  and  $R_3$ , forming an even arc;  $R_{2+3+4}$  and  $R_{2+3}$  subequal; all outer branches of *Rs* extending generally parallel to one another; cell *1st M*<sub>2</sub> long-rectangular, with *m-cu* at near midlength, the cell about as long as vein *M*<sub>4</sub>.

Abdomen, including hypopygium, black. Ovipositor with cerci relatively long and slender, with setæ to the acute tips. Male hypopygium with the tergite large and conspicuous, transverse, the caudal margin broadly and gently concave, provided with an unbroken double row totalling at least 100 spinous setæ, those at the ends of row not modified into a brush or pencil. Basistyle short and stout, on mesal face at cephalic end with a dense oval cushion of long black setæ totalling about 50 in number. Outer dististyle gradually narrowed outwardly, the inner margin with a row of small irregular blackened teeth, including a larger flange at base of the series. Inner dististyle about three-fourths as long as last, uniformly dark colored, gradually narrowed outwardly, the tip a small blackened point; style provided with long erect setæ. Gonapophyses appearing as two separate blackened plates, one on either side of the slender ædeagus, the tips of the blades incurved and contiguous.

Habitat.—Costa Rica.

Holotype, ♂, Turrialba, November 1922 (Schild). Allotopotype, ♀.

*Gnophomyia (Gnophomyia) pulvinaris* is entirely distinct from the now numerous species of the genus that center about *G. (G.) mæstitia* Alexander, having in the male an enlarged ninth tergite that is provided with an armature of strong spinous setæ. The most similar species is *G. (G.) nimbifera* Alexander, of Peru, which has all details of the male hypopygium distinct. The cushion of setæ on the basistyle of the present fly provides a distinctive character.

### Genus *Neognophomyia* Alexander

*Neognophomyia schildi* new species.

General coloration of mesonotum reddish brown; pleura yellow, with an almost continuous darkened dorsal stripe; femora yellow, the tips narrowly infuscated; wings whitish subhyaline, restrictedly patterned with brown, including a narrow band over the anterior cord; male hypopygium with the tergal spines strong and powerful, blackened; outer dististyle slender, with five setæ, of which two occupy the apex; phallosome consisting of two broadly flattened plates that subtend the shorter ædeagus, the apex of each blade terminating in a small conical darkened point that is directed laterad.

MALE.—Length about 5 mm.; wing 5 mm.

Rostrum yellow; basal segment of palpus yellow, outer segments brown. Antennæ with scape brownish yellow, pedicel light brown, flagellum brown; flagellar segments oval, with long conspicuous verticils. Head yellow, darker behind.

Pronotum very pale brown, the lateral borders of the scutellum, with the pretergites, pale yellow. Mesonotal præscutum with the disk reddish brown, the lateral and humeral borders yellow; scutal lobes a trifle more darkened; scutellum obscure yellow. Pleura clear light yellow ventrally, the dorsal sclerites chiefly infuscated, including the propleura, anepisternum and pleurotergite, somewhat paler brown on the dorsal pteropleurite, the whole forming a broad dorsal pleural stripe. Halteres with stem light yellow, knob infuscated. Legs with the coxæ and trochanters light yellow; femora yellow, the tips narrowly and weakly infuscated; tibiæ and basitarsi yellow; outer tarsal segments passing into brownish black. Wings whitish subhyaline, restrictedly patterned with brown, including a narrow band over anterior cord and very narrow seams over the posterior cord and outer end of cell *1st M*<sub>2</sub>; a very restricted darkening near wing base, especially in cell *M*; veins brownish yellow, darker in the patterned areas. Venation: *Sc*<sub>1</sub> ending about opposite *R*<sub>2</sub>; *R*<sub>2+3+4</sub> subequal to *R*<sub>3+4</sub>; venation of outer radial field normal for the genus, cell *R*<sub>2</sub> at margin being very reduced, cell *R*<sub>3</sub> greatly widened; cell *1st M*<sub>2</sub> short and strongly widened outwardly, *m-cu* at near midlength.

Abdominal tergites chiefly infuscated, the subterminal ones more yellowed; sternites yellow; hypopygium chestnut brown. Male hypopygium with the tergal spines strong and powerful, blackened, nearly straight, narrowed to acute points. Dististyle unusually small and simple; outer dististyle slender, narrowed to the obtuse tip which bears two long setæ, with three further similar setæ along outer margin; near base of style, on lower margin, with a low lobe or flange; inner dististyle large, generally triangular in outline, narrowed to the subobtuse apex, outer margin with a row of about six or seven strong setæ; basal flange low, provided with a similar number of much longer setæ. Phallosome consisting of two broadly flattened plates subtending the slightly shorter ædeagus, the tips of the blades terminating in small conical darkened points that are directed laterad (in slide mounts).

Habitat.—Costa Rica.

Holotype, ♂, Turrialba, November 1922 (Schild); Melander Collection. Paratopotype, ♂; Alexander Collection.

Among the described species of the genus that have the male hypopygium with heavily blackened and powerful tergal spines, including *Neognophomyia colombicola* Alexander, *N. consociata* Alexander, *N. pervicax* Alexander and *N. scapha* Alexander, the present fly differs conspicuously in all details of structure of the male hypopygium, particularly of the dististyles and phallosome. It is perhaps closest to *consociata* yet amply distinct. I take pleasure in dedicating this fly to the memory of the collector, Mr. Pablo Schild.

### Genus *Gonomyia* Meigen

***Gonomyia* (*Lipophleps*) *lustralis* new species.**

Belongs to the *manca* group; size medium (wing, male, 3.8 mm.); general coloration of præscutum cinnamon brown, unpatterned; antennæ (male) long, the flagellar segments with abundant long erect setæ, additional to the long, unilaterally distributed verticils; thoracic pleura with an ill-defined whitish longitudinal stripe; knobs of halteres infuscated; legs medium brown; male hypopygium with the basistyle produced far beyond the origin of dististyle as a long pale clavate lobe; dististyle conspicuously forked, the style bearing a slender blackened arm on the outer margin beyond midlength; phallosome without blackened elements.

MALE.—Length about 3.5 mm.; wing 3.8 mm.

Rostrum yellow; palpi black. Antennæ dark brown, relatively elongate; flagellar segments long-cylindrical, with abundant long erect setæ, additional to the still longer, unilaterally distributed verticils, the latter occurring on the more proximal segments only. Head above chiefly pale, the central posterior vertex darkened.

Pronotum and pretergites very pale yellow. Mesonotal præscutum uniformly light cinnamon brown, unpatterned; scutal lobes a trifle darker, the broad median area yellow; scutellum yellow, slightly darkened at base; mediotergite brownish gray. Pleura and pleurotergite chiefly yellow, the former with an ill-defined, more whitened, longitudinal stripe extending to the base of the abdomen. Halteres with stem pale, knob infuscated. Legs with the coxæ and trochanters testaceous yellow; remainder of legs medium brown. Wings with a weak brownish tinge, the prearcular and costal fields light yellow; stigma scarcely indicated as a very weak darkening; veins pale brown, including those in the brightened fields. Venation:  $Sc_1$  ending opposite origin of  $R_s$ , the latter about four-fifths to five-sixths the length of its anterior branch;  $m-cu$  close to the fork of  $M$ .

Abdominal tergites dark brown, sternites paler; hypopygium chiefly weakly infuscated. Male hypopygium with the outer apical angle of basistyle greatly produced beyond the origin of the dististyle, the lobe being fully as long as the basal portion of style, slightly dilated outwardly, the outer end with unusually long setæ. Dististyle conspicuously forked, the main body pale, bearing the usual two fasciculate setæ at and below the apex; on outer margin beyond midlength, the style bears a slender blackened lobe or arm, approximately equal in length to but much narrower than the true apex of the style. Phallosome with all elements pale, undarkened, with two long flattened blades that are subacute at tips, together with an obtuse median lobe that juts slightly distad of the paired blades.

Habitat.—Costa Rica.

Holotype, ♂, Turrialba, November 1922 (Schild).

*Gonomyia (Lipophleps) lustralis* is entirely distinct from the very numerous members of the *manca* group occurring in Tropical America. It shows affinity with species such as *G. (L.) batesi* Alexander, but differs from all other forms in the structure of the male hypopygium.

### Genus *Erioptera* Meigen

***Erioptera (Mesocyphona) turrialbæ* new species.**

Size small (wing, male, less than 3 mm.); general coloration dark brown; thoracic pleura striped longitudinally with pale; femora very pale brown, the tips very narrowly and indistinctly whitened; wings uniformly tinged with pale brown; male hypopygium with a single three-branched dististyle, the axial branch stoutest and longest, the acute apex glabrous; lower branch pale, slightly more basal in position than the blackened upper arm; gonapophyses single, appearing as a very strongly sinuous blackened rod.

MALE.—Length about 2.5 mm.; wing 2.8 mm.

Rostrum and palpi black. Antennæ black throughout; verticils very long. Head dark brown, the front and orbits narrowly gray.

Pronotum dark brown. Mesonotum almost uniformly dark brown, the scutellum a trifle more testaceous. Pleura dark brown, with a ventral yellowish longitudinal stripe, the dorsopleural region pale. Halteres with stem yellow, knob weakly darkened. Legs with the coxæ and trochanters obscure yellow; femora very pale brown, the tips narrowly and indistinctly whitened; remainder of legs more brownish yellow. Wings with a uniform pale brownish tinge; veins pale brown, trichia dark brown. Venation: Cell  $M_2$  open by atrophy of basal section of  $M_3$ ; vein *2nd A* with outer third deflected slightly cephalad.

Abdomen, including hypopygium, dark brown. Male hypopygium with a single dististyle that is conspicuously three-branched; main axis longest and stoutest, its apex acutely pointed, glabrous; outer or dorsal branch slender, blackened, about two-thirds as long as the axial point; lower or ventral branch arising a trifle nearer base of style than does the outer spine, entirely pale, the tip obtuse and microscopically setuliferous. Gonapophysis of either side single, appearing as a very strongly sinuous blackened rod, gradually narrowed to the acute spinous point, the latter decussate at the midline.

Habitat.—Costa Rica.

Holotype, ♂, Turrialba, November 1922 (Schild).

This species is allied to various other regional species, including *Erioptera (Mesocyphona) factiosa* Alexander, *E. (M.) invariegata* Alexander, *E. (M.) modica* Alexander, *E. (M.) quadrifurcata* Alexander, and *E. (M.) withycombei* Alexander, differing in the structure of the male hypopygium.